

(b) Amendments to the Claims

Please amend claims 44, 53 and 54 and add new claims 55-62 as follows. A detailed listing of all the claims that are or were in the application is hereafter provided.

Claims 1 - 43 (Cancelled)

44. (Currently Amended) A structure comprising:

a first portion containing a polyimide; and

a second portion formed on the first portion,

wherein the second portion has tubular pores, the tubular pores are aligned uniaxially and extend alongside a boundary surface between the first portion and the second portion, the polyimide has a sequence of two or more adjacent methylene groups in a repeating unit of the polyimide, the sequence of adjacent methylene groups in the repeating unit is present in a main chain of the polyimide, and the polyimide chains are is oriented, wherein the tubular pores are ~~oriented to be perpendicular to an in-plane rotation angle of 0° for the oriented polyimide, said tubular pores having a Gaussian profile with a half-width aligned with a normal distribution, full width at a half maximum of the normal distribution of orientation of direction of being~~ about 35° or less.

45. (Previously Presented) The structure according to claim 44, wherein the first portion is comprised of a Langmuir-Blodgett film.

46. (Previously Presented) The structure according to claim 44, wherein the second portion contains silicon.

47. (Previously Presented) The structure according to claim 44, wherein the structure contains silica.

48. (Previously Presented) The structure according to claim 44, wherein the number of adjacent methylene groups in the repeating unit of the polyimide ranges from 2 to 20.

49. (Cancelled)

50. (Cancelled)

51. (Previously Presented) The structure according to claim 44, wherein a surfactant is contained in the pore structure.

52. (Previously Presented) The structure according to claim 54, wherein the pores are mesopores.

53. (Currently Amended) A structure comprising:
a first portion containing a polyimide; and
a second portion formed on the first portion,

wherein the second portion has tubular pores, the tubular pores are aligned uniaxially and extend alongside a boundary surface between the first portion and the second portion, the polyimide has a sequence of two or more adjacent methylene groups in a repeating unit of the polyimide, the sequence of adjacent methylene groups in the repeating unit is present in a side chain of the polyimide, and the polyimide chains are is oriented, wherein the tubular pores are aligned with a normal distribution, full width at a half maximum of the normal distribution being oriented to be perpendicular to an in-plane rotation angle of 0° for the oriented polyimide, said tubular pores having a Gaussian profile with a half-width distribution of orientation of direction of about 35° or less.

54. (Currently Amended) A structure comprising:

a first portion containing a polymer; and

a second portion formed on the first portion,

wherein the second portion has tubular pores, the tubular pores are aligned uniaxially and extend alongside a boundary surface between the first portion and the second portion, the polymer has a sequence of two or more adjacent methylene groups and at least one imide bond in a repeating unit of the polymer and the polymer chains are is oriented, wherein the tubular pores are aligned with a normal distribution, full width at a half maximum of the normal distribution being oriented to be perpendicular to an in-plane rotation angle of 0° for the oriented polymer, said tubular pores having a Gaussian profile with a half-width distribution of orientation of direction of about 35° or less.

55. (New) A structure according to claim 44, wherein the tubular pores are aligned perpendicularly to the orientation direction of the polyimide chains.

56. (New) A structure according to claim 54, wherein the tubular pores are aligned perpendicularly to the orientation direction of the polymer chains.

57. (New) The structure according to claim 54, wherein the first portion is comprised of a Langmuir-Blodgett film.

58. (New) The structure according to claim 54, wherein the second portion contains silicon.

59. (New) The structure according to claim 54, wherein the structure contains silica.

60. (New) The structure according to claim 54, wherein the number of adjacent methylene groups in the repeating unit of the polyimide ranges from 2 to 20.

61. (New) The structure according to claim 54, wherein a surfactant is contained in the pore structure.

62. (New) The structure according to claim 54, wherein the pores are mesopores.